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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,061	01/15/2002	Toren S. Davis	H0002526 (A66) US	1119

7590 01/13/2005

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EXAMINER

TORRES, MELANIE

ART UNIT PAPER NUMBER

3683

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



Office Action Summary

Application No.

10/050,061

Applicant(s)

DAVIS, TOREN S.

Examiner

Melanie Torres

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5,7-10 and 12-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5,7-10 and 12-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 5, 7, 10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Griffen et al.

Re claims 5, and 10, Griffen et al. teaches a tuned mass damper comprising a mass having predetermined inertia properties and a plurality of isolators (hexapod/secondary suspension) arranged in a hexapod configuration, each isolator having at least a first end and a second end, each isolator first end coupled to the mass (Secondary mass) and each isolator second end adapted to couple to a structure (Primary Mass or Payload) that may experience vibrations at particular frequencies in six independent degrees of freedom, wherein each of the isolators in combination with the mass, is configured to be tuned independent of the other isolators to reduce a first particular frequency of the vibrations experienced by the structure. (Fig. 9, Column 1, line 67 – Column 2, line 9, Column 7, lines 18-21)

Re claims 7 and 12, Griffen et al. teaches wherein each of the isolators, in combination with the mass, is individually tuned such that a combination of two or more

isolators reduces a particular frequency. It is the examiner's position that this would be an inherent feature of the structure.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8 and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Griffen et al. in view of Cunningham et al.

Re claims 8 and 13, Griffen et al. teach wherein each isolator second end is adapted to couple the structure at a predetermined location thereon. However, Griffen et al. do not teach wherein each isolator comprises a spring having an adjustable spring constant, and wherein each isolator is individually tuned by adjusting its spring constant and the predetermined location on the structure to which its second end will couple. Cunningham et al. teaches wherein each isolator comprises a spring having an adjustable spring constant, and wherein each isolator is individually tuned by adjusting its spring constant and the predetermined location on the structure to which its second end will couple as is acknowledged by applicant on page 2, lines 17-21. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have tuned and adjusted each isolator to provide the desired vibration isolation in six degrees of freedom.

5. Claims 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffen et al. in view of Gran et al.

Re claim 9, Griffin et al. does not teach wherein the isolators comprise tubular damping struts with first and second spherical pivots at opposite ends of the tubular damping strut. Gran et al. teaches isolators comprise tubular damping struts (6) with first and second spherical pivots at opposite ends of the tubular damping strut in a hexapod configuration. (Fig. 2, 6) The examiner takes official notice that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the isolators and pivots of Gran et al. in the assembly of Griffin et al. as the use of damping struts and pivots is well known in hexapod assemblies.

Response to Arguments

6. Applicant's arguments filed October 25, 2004 have been fully considered but they are not persuasive.

Applicant argues that the prior art of record does not teach wherein the mass damper has a structure that may experience vibrations at particular frequencies at particular locations on the structure in six independent degrees of freedom. The examiner maintains that the structure argued in the response and disclosed by applicant indicates that the novelty lies in the hexapod configuration, particularly with respect to the pivot points of the strut on page 4 of the instant specification. This is disclosed by Griffen et al. as can be seen by figure 9 and in column 7, lines 14-29. Applicant admits

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on page 2 of the specification that it is known and taught by the prior art that body modes can be adjusted and decoupled from each other by changing strut angles, stiffness, damping and TMD mass properties. Therefore, this argument is considered moot. Finally, in column 7, lines 18-21, Griffin et al. specifically discloses wherein the system can be used to attenuate the response of multiple modes of the primary structure as argued by applicant.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

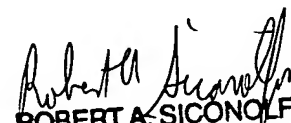
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie Torres whose telephone number is (703)305-0293. The examiner can normally be reached on Monday-Friday, 6:30 AM - 4:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci can be reached on (703)308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MT
January 6, 2005


ROBERT A. SICONOLFI
PATENT EXAMINER
1/10/04